WHAT IS CLAIMED IS:

1. A projection type image display apparatus comprising:

an electroluminescence element having a plurality of pixels that can be individually modulated, in which two-dimensionally arranged pixels generate excitons by injecting charge carriers into a luminescent layer and generate and emit light by recombination of the excitons; and

a projection optical system that projects light emitted from the pixels in the electroluminescence element onto a target object,

wherein the projection optical system has a characteristic non-telecentric toward the electroluminescence element as a luminous object with principal rays which passes through the median point of an aperture pupil that captures light diffusively emitted from the pixels converging when seen from the electroluminescence element, at a pixel position where the object height on the electroluminescence element from an optical axis of the projection optical system reaches a maximum.

2. The projection type image display apparatus according to claim 1, wherein the principal ray which is non-telecentric toward the luminous object is tilted 5 degrees or more with respect to the normal line of the

image modulation plane of the electroluminescence element at the position of the maximum object height.

3. The projection type image display apparatus according to claim 1, wherein the electroluminescence element has a repetitive matrix array of emission pixels for three primary colors and displays an additive color mixture image.

4. The projection type image display apparatus according to claim 1, further comprising:

three electroluminescence elements emitting three primary color light beams respectively; and

a wavelength-combining element that combines the light beams emitted from the three electroluminescence elements using dichroic films,

wherein the projection optical system projects the light combined by the wavelength-combining element onto the target object and displays an additive color mixture image.

5. The projection type image display apparatus according to claim 4, wherein the three electroluminescence elements are a red electroluminescence element, green electroluminescence element and blue electroluminescence element that emit

light beams of red, green and blue which are three primary colors, respectively

the wavelength-combining element has a red reflecting dichroic film that reflects red light and transmits green light and blue light and a blue reflecting dichroic film that reflects blue light and transmits green light and red light,

the light emitted from the red electroluminescence element is reflected on the red reflecting dichroic film, transmitted through the blue reflecting dichroic film and led into the projection optical system, the light emitted from the blue electroluminescence element is reflected on the blue reflecting dichroic film, transmitted through the red reflecting dichroic film and led into the projection optical system and the light emitted from the green electroluminescence element is transmitted through the red reflecting dichroic film and the blue reflecting dichroic film and led into the projection optical system,

wherein, when an angle formed by the normal lines of the dichroic films with respect to the optical axis of the projection optical system is θa;

an angle formed by the principal ray with respect to the normal line of the emission plane of the electroluminescence element at the position of the maximum object height from the optical axis in the emission region of the electroluminescence element within

a plane on which the three color light beams are combined is θp; and

a half angle at which an aperture pupil of the projection optical system that captures the light beam emitted from the electroluminescence element observes the position of the maximum object height from the optical axis in the emission region of the electroluminescence elements is θn,

a half-value intensity wavelength on the short wavelength side of the wavelength spectrum of the light emitted from the red electroluminescence element is longer than the 80% reflected wavelength at the average of S-polarized light and P-polarized light at an angle of incidence of $\theta a+\theta p+\theta n$ with respect to the normal line of the red reflecting dichroic film,

a half-value intensity wavelength on the long wavelength side of the wavelength spectrum of the light emitted from the blue electroluminescence element is shorter than the 80% reflected wavelength at the average of S-polarized light and P-polarized light at an angle of incidence of $\theta a-\theta p-\theta n$ with respect to the normal line of the blue reflecting dichroic film,

a half-value intensity wavelength on the short wavelength side of the wavelength spectrum of the light emitted from the green electroluminescence element is longer than the 20% reflected wavelength at the average of S-polarized light and P-polarized light at an angle of

incidence of $\theta a+\theta p+\theta n$ with respect to the normal line of the blue reflecting dichroic film, and

a half-value intensity wavelength on the long wavelength side of the wavelength spectrum of the light emitted from the green electroluminescence element is shorter than the 20% reflected wavelength at the average of S-polarized light and P-polarized light at an angle of incidence of $\theta a-\theta p-\theta n$ with respect to the normal line of the red reflecting dichroic film.

6. The projection type image display apparatus according to claim 4, wherein the three electroluminescence elements are a red electroluminescence element, green electroluminescence element and blue electroluminescence element that emit light beams of red, green and blue which are three primary colors, and emit the polarized light whose polarization direction is perpendicular to the plane on which the three color beams are combined by the wavelength-combining element preferentially over polarized light whose polarization direction is in parallel to the the plane,

the wavelength-combining element includes a red reflecting dichroic film that reflects red light and transmits green light and blue light and a blue reflecting dichroic film that reflects blue light and transmits green light and red light,

the light emitted from the red electroluminescence element is reflected on the red reflecting dichroic film, transmitted through the blue reflecting dichroic film and led into the projection optical system, the light emitted from the blue electroluminescence element is reflected on the blue reflecting dichroic film, transmitted through the red reflecting dichroic film and led into the projection optical system and the light emitted from the green electroluminescence element is transmitted through the red reflecting dichroic film and the blue reflecting dichroic film and led into the projection optical system,

wherein, when an the angle formed by the normal lines of the dichroic films with respect to the optical axis of the projection optical system is θa;

an angle formed by the principal ray with respect to the normal line of the emission plane of the electroluminescence element at the position of the maximum object height from the optical axis in the emission region of the electroluminescence element within a plane on which the three color light beams are combined is θp; and

a half angle at which an aperture pupil of the projection optical system that captures the light beam emitted from the electroluminescence element observes the position of the maximum object height from the optical axis in the emission region of the electroluminescence element is θn,

a half-value intensity wavelength on the short wavelength side of the wavelength spectrum of the light emitted from the red electroluminescence element is longer than the 80% reflected wavelength of S-polarized light forming an angle of incidence of $\theta a+\theta p+\theta n$ with respect to the normal line of the red reflecting dichroic film,

a half-value intensity wavelength on the long wavelength side of the wavelength spectrum of the light emitted from the blue electroluminescence element is shorter than the 80% reflected wavelength of S-polarized light forming an angle of incidence of $\theta a-\theta p-\theta n$ with respect to the normal line of the blue reflecting dichroic film,

a half-value intensity wavelength on the short wavelength side of the wavelength spectrum of the light emitted from the green electroluminescence element is longer than the 20% reflected wavelength of S-polarized light forming an angle of incidence of $\theta a+\theta p+\theta n$ with respect to the normal line of the blue reflecting dichroic film, and

a half-value intensity wavelength on the long wavelength side of the wavelength spectrum of the light emitted from the green electroluminescence element is shorter than the 20% reflected wavelength of S-polarized light forming an angle of incidence of $\theta a-\theta p-\theta n$ with

respect to the normal line of the red reflecting dichroic film.

7. An image display system comprising:

the projection type image display apparatus according to claim 1; and

a screen onto which an image is projected by the projection type image display apparatus,

wherein an image projected on the screen is recognized by an observer by means of diffused light that has been reflected by the screen and has predetermined directivity.

8. An image display system comprising:

the projection type image display apparatus according to claim 1; and

a screen onto which an image is projected by the projection type image display apparatus,

wherein an image projected on the screen is recognized by an observer by means of diffused light that has been transmitted through the screen and has predetermined directivity..

9. A projection type image display apparatus comprising:

an electroluminescence element having a plurality of pixels that can be individually modulated, in which two-

dimensionally arranged modulation pixels generate excitons by injecting charge carriers into a luminescent layer and generate and emit light by recombination of the excitons; and

a projection optical system that projects light emitted from the pixels in the electroluminescence element onto a target object and displays an image,

wherein the luminescent layer of the electroluminescence element has a film structure based on the structure in which the luminescent layer is sandwiched between one or more charge carrier transfer layers for supplying electrons and holes to the luminescent layer, and

a light emission direction control element having two-dimensionally arranged microstructures having a pyramid-shaped pentahedron as a refractive index boundary is placed in contact on an emission side of the film structure,.

10. The projection type image display apparatus according to claim 9, wherein the electroluminescence element has a repetitive matrix arrangement of emission pixels of three primary colors and displays an additive color mixture image.

11. The projection type image display apparatus according to claim 9, further comprising:

three electroluminescence elements that emit three primary color beams respectively; and

a wavelength-combining element that combines the light beams emitted from the three electroluminescence elements using dichroic films,

wherein the projection optical system projects the light combined by the wavelength-combining element onto the target object and displays an additive color mixture image.

12. The projection type image display apparatus according to claim 9, wherein the light emission direction control element has a structure with a transparent material embedded in a pyramid shape on the surface of a transparent glass substrate or transparent plastic substrate on which the film structure of the electroluminescence element is formed, the transparent material having a refractive index higher than the refractive index of the substrate.

13. The projection type image display apparatus according to claim 9, wherein the light emission direction control element is a microstructure film with a transparent material embedded in a pyramid shape on the surface of one side of a substrate film made of transparent glass or transparent plastic, the transparent

material having a refractive index higher than the refractive index of the substrate,

the microstructure film is joined to a surface layer on the emission side of the film structure of the electroluminescence elements formed on a surface of a logic circuit substrate in which a logic circuit controlling light emission is formed.

14. The projection type image display apparatus according to claim 13, wherein the microstructure film is joined to the surface layer on the emission side of the electroluminescence element by vacuum lamination, compatible adhesion through a solvent or adhesion through a hard thin film adhesion layer.

15. The projection type image display apparatus according to claim 9, wherein an arranging pitch of the microstructures is 1/N (N: positive integer) of the pitch of the pixels arranged in an image modulation display panel made up of the electroluminescence element.

16. The projection type image display apparatus according to claim 15, wherein the arranging pitch of the microstructures is equal to the pitch of the pixels at display surface coordinates of the image modulation display panel, and

the positions of vertices of the microstructures align with the position of the area median point of the pixel emission area with the accuracy of 1/5 of the pitch of the pixels or higher.

17. The projection type image display apparatus according to claim 15, wherein the arranging pitch of the microstructures is 1/N (N: positive integer) of the pitch of the pixels, and

the microstructure film is joined without being aligned with the position of each pixel arranged in the image modulation display panel.

18. An image display system comprising:

the projection type image display apparatus according to claim 9; and

a screen onto which an image is projected by the projection type image display apparatus,

wherein an image projected on the screen is recognized by an observer by means of diffused light that has been reflected by the screen and has predetermined directivity.

19. An image display system comprising:

the projection type image display apparatus according to claim 9; and

a screen onto which an image is projected by the projection type image display apparatus,

wherein an image projected on the screen is recognized by an observer by means of diffused light that has been transmitted through the screen and has predetermined directivity.

20. A projection type image display apparatus comprising:

three electroluminescence elements each having a plurality of pixels that can be individually modulated and emitting three primary color light beams respectively, in which two-dimensionally arranged modulation pixels generate excitons by injecting charge carriers into a luminescent layer and generate and emit light by recombination of the excitons;

a cross dichroic wavelength-combining element that combines the light beams emitted from the three electroluminescence elements using dichroic films in a crossing arrangement; and

a projection optical system that projects the light combined by the cross dichroic wavelength-combining element onto a target object and displays an additive color mixture image,

wherein the cross dichroic wavelength-combining element has a pyramid shape with six or more external surfaces,

an acute angle formed between the dichroic film and an optical axis of the projection optical system is greater than 45°,

the cross dichroic wavelength-combining element has four surfaces perpendicular to three optical axes including the optical axis of the projection optical system which is deflected by the dichroic films, and

three of the four surfaces are arranged substantially in parallel to modulation emission planes of the three electroluminescence elements and the combined light is emerged from the remaining one surface toward the projection optical system.

21. The projection type image display apparatus according to claim 20, wherein the acute angle formed between the dichroic film and the optical axis of the projection optical system is greater than 45° and smaller than 55°.

22. The projection type image display apparatus according to claim 20, wherein the lengths of the normal lines from the ridges on which the dichroic films cross each other to the three surfaces substantially in parallel to the modulation emission planes of the electroluminescence elements are substantially equal to each other.

23. An image display system comprising:

the projection type image display apparatus according to claim 20; and

a screen onto which an image is projected by the projection type image display apparatus,

wherein an image projected on the screen is recognized by an observer by means of diffused light that has been reflected by the screen and has predetermined directivity.

24. An image display system comprising:

the projection type image display apparatus according to claim 20; and

a screen onto which an image is projected by the projection type image display apparatus,

wherein an image projected on the screen is recognized by an observer by means of diffused light that has been transmitted through the screen and has predetermined directivity.